LBA350 series

XP Power

350W Fan cooled

AC-DC power supplies

The LBA350 series of compact, fan-cooled 350W AC-DC power supplies are designed to deliver consistent, reliable performance across a wide range of industrial technology applications. With a wide input range, active power factor correction, regulated single output voltages from 12V to 48VDC and output voltage adjustment, the LBA350 series provides engineers with a versatile and robust power platform suitable for demanding industrial environments.

Featuring Class B conducted and radiated emissions, worldwide ITE safety approvals, wide temperature range, compact footprint, a power "ON" LED and an integrated connector cover, the LBA350 is designed for easy integration into applications including auxiliary power units, security and surveillance systems, industrial automation, lighting control, smart home and building control equipment.

Features

- 350W fan cooled
- Universal, single phase input: 90 to 264VAC
- Regulated single outputs from 12V to 48VDC
- Active PFC
- ITE safety approvals
- Class B conducted & radiated emissions
- Integrated connector cover
- Output voltage trim
- Efficiency, up to 89%
- Short circuit, overvoltage & overload protection
- LED power ON status indicator
- -30°C to +70°C operating temperature
- 3 year warranty

Applications

Industrial electronics

Instrumentation

Robotics

Technology

Dimensions

215.0 x 115.0 x 30.0 mm (8.46" x 4.53" x 1.18")

Documentation

For further information click the link or scan the code

→ xppower.com

Models & ratings

Model number	Output voltage		Output current	Ripple & noise pk to pk[1]	Efficiency[2]	Maximum capacitive load	Power
	Nominal	Adjustment range[3]					
LBA350PS12	12.0V	10.8 - 13.2V	27.0A	150mV	86.0%	4000µF	325W
LBA350PS15	15.0V	13.5 - 15.5V	22.0A	150mV	87.0%	3200µF	330W
LBA350PS24	24.0V	20.0 - 26.4V	14.6A	150mV	88.0%	1500µF	350W
LBA350US48	48.0V	41.0 - 56.0V	7.4A	240mV	89.0%	470µF	350W

Notes:

1. Ripple & noise measured with 20MHz bandwidth and using 20±2cm twisted pair-wire terminated with 47µF electrolytic capacitor in parallel with 0.1µF ceramic capacitor.
2. Typical efficiencies measured at 230VAC full load.
3. The total output power must not exceed the rated output power.

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Input voltage - operating	90	115/230	264	VAC	Derate output power linearly from 100% at 110VAC to 80% at 90VAC.
Input frequency	47	50/60	63	Hz	
Power factor		0.98			115VAC at full load
		0.95			230VAC at full load
Input current - full load			4.5	A	115VAC at full load
			2.2		230VAC at full load
Inrush current			30	A	115VAC cold start at +25°C ambient
			60		230VAC cold start at +25°C ambient
Earth leakage current			1.0	mA	240VAC / 50Hz
Input protection	T6.3A/250VAC Internal fuse fitted in line				

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions	
Output voltage	12		48	VDC	See Models & Ratings table	
Initial set accuracy			±1		Full load	
Voltage adjustment	See models & ratings table					
Minimum load	0			A	No minimum load required	
Start up time			3/1.5	s	115 / 230VAC full load at +25°C	
Rise time			50	ms	Full load	
Hold up time	8			ms	115 / 230VAC, full load	
Line regulation			±0.5	%	110-264VAC, full load	
Load regulation			1	%	0 -100% load	
Transient response			4	%	Recovery within 1% in less than 0.5ms for a 50-75% and 75-50% load step	
Ripple & noise	See models & ratings table					
Over / Undershoot			10	%	Full load	
Overvoltage protection	110		145	%	12V, 15V, 24V models	Protection type: Clamp, auto recovery
			60	V	48V model	
Overload protection	110		160	%	Nominal output current, hiccup with auto recovery	
Temperature coefficient		±0.03		%/°C		
Short circuit protection	Continuous hiccup with auto recovery					

Notes:

All specifications valid at 230VAC, full load and +25°C , unless otherwise stated.

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Efficiency	See models & ratings table				
Isolation: input to output	3000			VAC	Class I construction
input to ground	1800			VAC	
output to ground	500			VAC	
Switching frequency		75		kHz	PFC & Main converter
Power density			0.4723 (7.74)	W/cm³ (W/in³)	
Mean time between failure	200			khrs	MIL-HDBK-217F, Notice 2 25°C GB
Weight		800 (1.76)		g (lb)	
Case material	Aluminium chassis with vented galvanized steel cover (AL1100 and SGCC)				

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & conditions
Operating temperature	-30		+70	°C	See derating curve
Storage temperature	-40		+85	°C	
Over temperature protection	EUT shutdown with auto recovery, temperature measured internally				
Cooling	Fan cooled				
Humidity	20		95	%RH	Non-condensing
Operating altitude			2000	m	
Vibration	Tested according to EN60068-2-27, 10-500Hz, 5g (1H) for each X, Y and Z plane				

EMC: emissions

Phenomenon	Standard	Test level	Notes & conditions
Conducted	EN55032	Class B	
Radiated	EN55032	Class B	
Harmonic current	EN61000-3-2	Class A	
Voltage flicker	EN61000-3-3		

EMC: immunity

Phenomenon	Standard	Test level	Criteria	Notes & conditions
ESD immunity	EN61000-4-2	2/3	B	Contact ±4kV / Air ±8kV
Radiated immunity	EN61000-4-3	10V/m	B	80 to 1000MHz
EFT	EN61000-4-4	±2kV	B	
Surge	EN61000-4-5	Installation class 3	B	Line to line ±1kV, line to ground ±2kV
Conducted	EN61000-4-6	10Vrms	B	
Magnetic field	EN61000-4-8	30A/m	B	
Dips	EN61000-4-11 (230VAC)	Dip. 100% (0VAC), 10ms	B	
		Dip. 20% (184VAC), 5000ms	B	
		Dip. 30% (161VAC), 500ms	B	
Interruptions	EN61000-4-11	Int. 100% (0VAC), 5000ms	C	

Notes:

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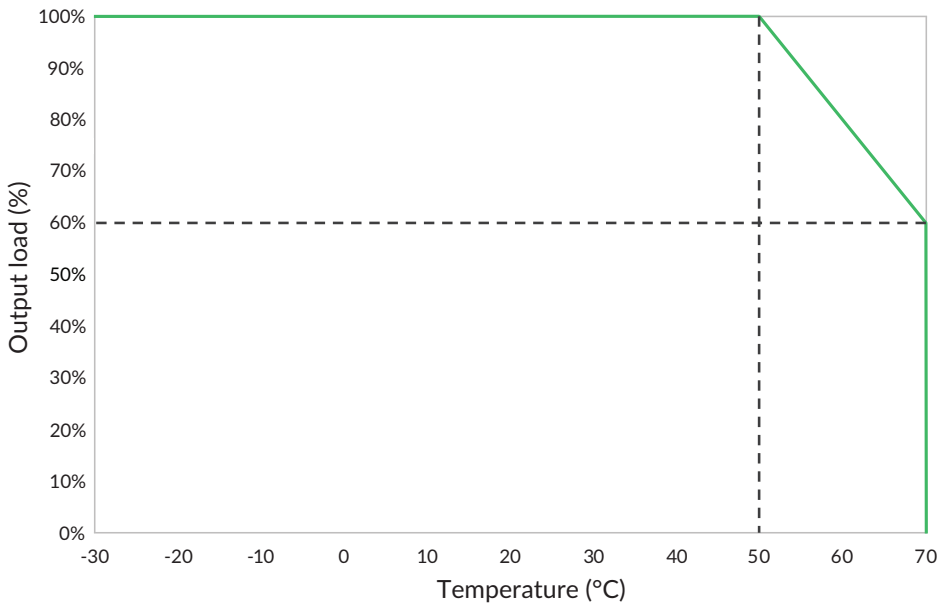
Safety approvals

Certification	Standard	Notes & conditions
CB	IEC62368-1	Information technology
UL	UL62368-1	Information technology
LVD	EN62368-1	Information technology
CCC	China Compulsory Certification, GB4943, GB17625.1, GB4943.1, GB/T9254	Information technology
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Application notes

Temperature derating



Notes:

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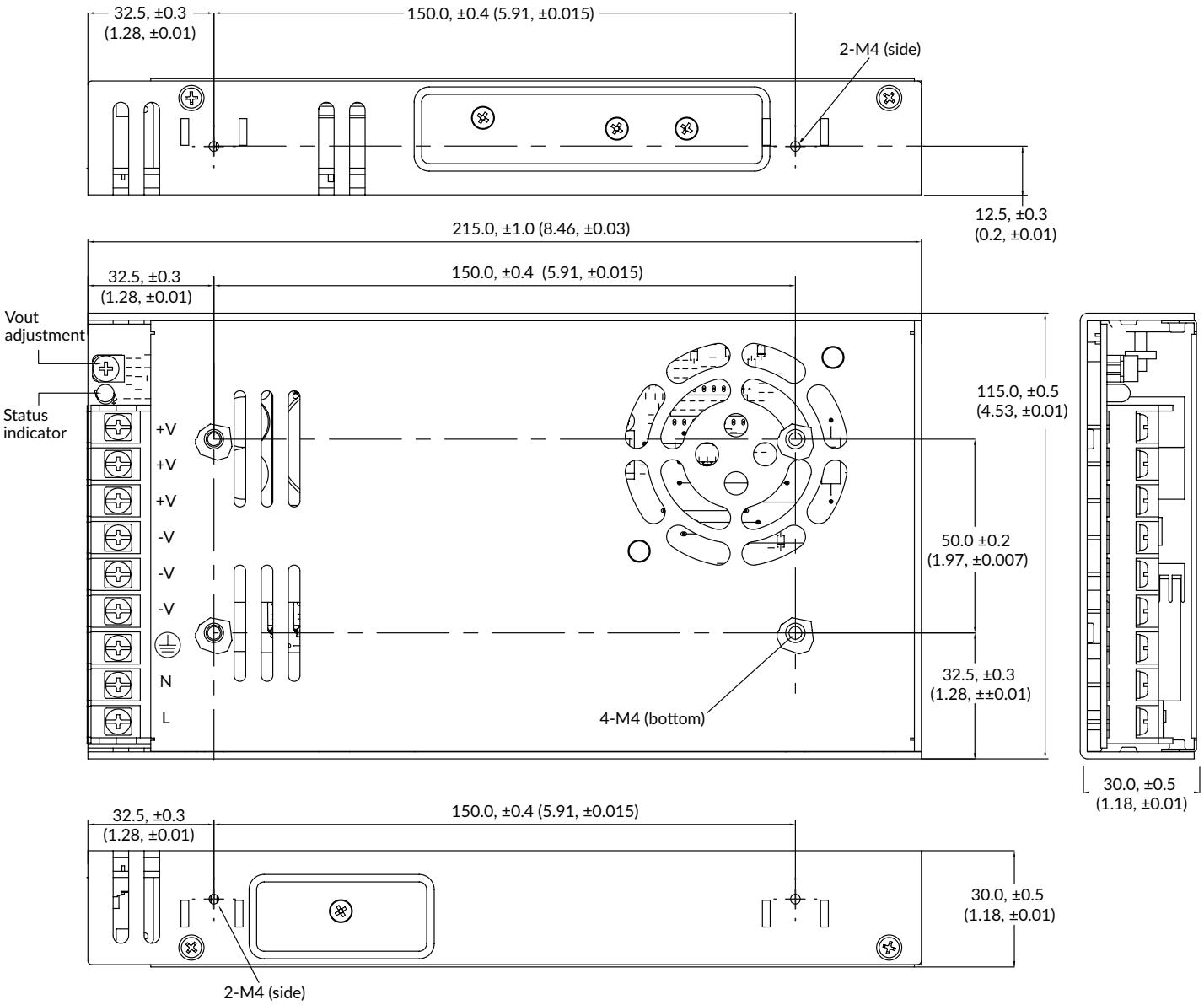
Mechanical details



Notes:

1. All dimensions are in mm (inches).
2. Terminal screw tightening torque: M4 1.2N-m (12Kgf-cm)
3. Mounting screw tightening torque: M4 0.8N-m (8Kgf-cm)
4. Mounting screw penetration depth: 4mm max
5. Chassis must be connected to protective earth